



For use in:

Steel, Aluminum, and Paper Mills
Power Generation Steam Valves
Material Creep Measurements
Roadway/Bridge Expansion
Hydro Power Plants

LV-45 Series

Inductive Linear Position Sensors

Designed Specifically for Heavy Duty Industrial and Civil Engineering Applications

Alliance Sensors Group LV-45 series linear position sensors are specifically targeted for measuring applications requiring rugged devices, whether measuring position of steam turbine valves, mounted in a paper mill head box or calender roll stand, or operating outdoors fastened to a bridge or structure. LV-45 sensors use a contactless inductive technology that allows them to replace other technology sensors like potentiometers and DC-LVDTs in most applications. With a simple coil design, a captive connecting rod, and a thick walled housing, the sensors are both shorter and more robust than their DC-LVDT counterparts while operating over a wider temperature range, so they can withstand the vibration and shock levels found in mills and power plants, as well as the temperature and humidity found in outdoor applications. Once a sensor has been installed, ASG's SenSet™ range adjustment process permits a user to match the sensor's zero and full scale outputs to the workpiece's actual range of motion.

Key Features:

- 7 full scale measuring ranges from 4 inches to 18 inches (100 to 450 mm)
- 1.75 inch (44.5 mm) diameter heavy wall aluminum or stainless steel body
- 1/2 inch diameter connecting rod with 1/2-20 male thread
- Radial or axial connector or cable terminations
- SenSet™ field adjustable range scaling

Electrical Specifications:

Input Power: 15-30 V DC, 24 V DC nominal, 60 mA
Analog Output: 0-10 VDC, 4-20 mA 3-wire sourcing (0.5 to 4.5 V DC optional)
Full Scale Ranges: 4, 6, 8, 10, 12, 15, 18 inches (100, 150, 200, 250, 300, 375, 450 mm)
Zero and Full Scale: End points field adjustable with SenSet™
Linearity Error: ±0.25% of FSO (Full Scale Output) max.
Resolution: 0.1% of FSO
Bandwidth (-3 dB): 100 Hz minimum

Environmental Specifications:

Operating Temperature: -20 to 85 C (-40 to 105 C optional)
Environmental Sealing: IEC IP-67
Humidity: 95% RH, non-condensing
Vibration: 5-20 Hz, 0.5 inch p-p; 20-2000 Hz, 4.2 g p-p
Shock: 1000 g, 11 ms

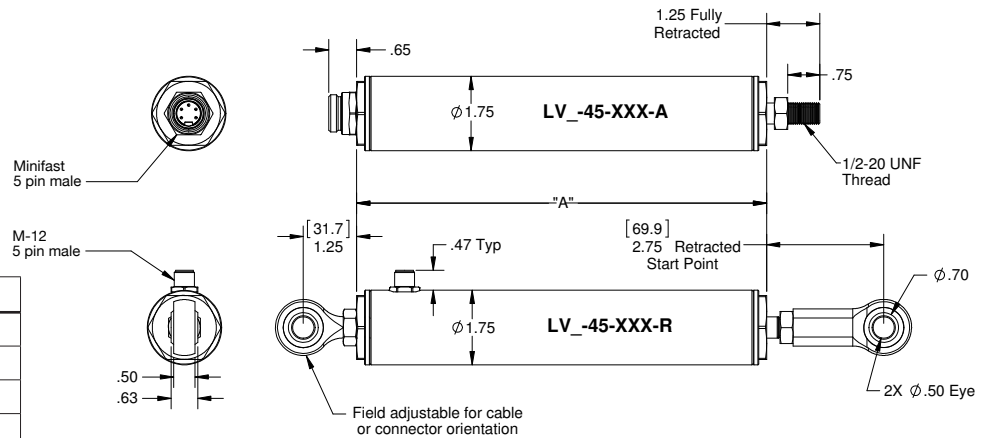
LV-45 Series



Wiring Table

Function	Pin	Cable Color
+24 V DC input	1	Red
Ground	2	Black
LVE voltage output	3	Green
LVI current output	4	Green
SenSet™	5	White

Linear Range	Length "A"
4 inches 100 mm	9.63 inches [244.5 mm]
6 inches 150 mm	11.63 inches [295.4 mm]
8 inches 200 mm	13.63 inches [346.2 mm]
10 inches 250 mm	15.63 inches [397.0 mm]
12 inches 300 mm	17.63 inches [447.8 mm]
15 inches 375 mm	20.63 inches [524.0 mm]
18 inches 450 mm	23.63 inches [600.2 mm]



**Axial M-12 Connector
(Standard)**



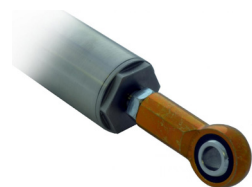
**Radial Connector
with Rod Eye End**



**1/2-20 Threaded End
(Standard)**



Rod Eye End



Ordering information:

Series	Output Type	OD (mm)	Linear Range	Electrical Termination		Analog Output	Housing Material
				Axial or Radial	Cable or Connector		
LV	X-	XX-	XXX-	X-	XX-	XX	X-
	E- voltage	45	100 mm	A- Axial	00- 1 m cable w/ cord grip	05- 0.5-4.5 V DC	A- Aluminum
	I- current		150 mm	R- Radial	01- 5-pin M-12 connector	10- 0-10 V DC	S- Stainless Steel
			200 mm			11- 10-0 V DC	
			250 mm			20- 4-20 mA DC	
			300 mm			21- 20-4 mA DC	
			375 mm		03- 5-pin Turck minifast connector (axial only)		
			450 mm		SP- consult factory for special connector		

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